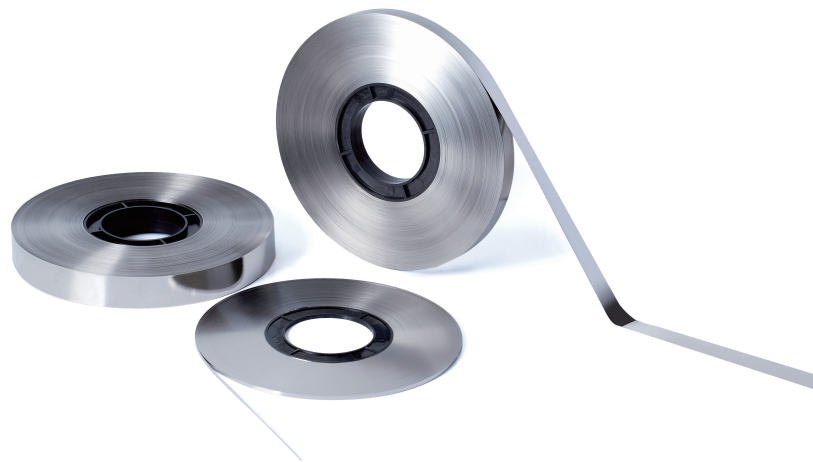


Fe-based Nanocrystalline Strip

Fe-based Nanocrystalline alloys are based on Fe with Si and B with further additions of Nb and Cu. A subsequent heat treatment at crystallization temperature degree transforms the initially amorphous microstructure of the tape into the desired nanocrystalline state, this being fine crystalline grains (grains diameter of 10 - 20 nm only) .

Nanocrystalline alloys combine high saturation flux density, high permeability, lowest coercivity, low core losses and good stability, high obdurability, and wear corrosion resistance, that make Nanocrystalline material as the best choice of soft magnetic materials and vastly superior in many aspects such as medium high frequency transformer, current transformer, CMC, can replace silicon steel, permalloy and ferrite materials.



Application

- EMC Common mode core
- Inverter transformer core
- Current transformer CT core
- Magnetic amplifier, peak suppressor, saturated inductance core
- Wireless charging electromagnetic shielding foil



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1K107B

Performance of 1K107B Nanocrystalline Strip

Item	Performance (Reference)	Item	Performance (Reference)
Bs (T) Saturate Induction	1.20	λs Magnetostriction	2.0×10 ⁻⁶
Tc (°C) Curie Temperature	570	ρ (g/cm ³) Density	7.3
Tx (°C) Crystallization Temperature	515	δ (μΩ•cm) Resistivity	110
Hardness	880	Hc (A/m) Coercivity	<2.0
μm Thickness	14 ~ 27	K Core filling coefficient	0.78
μ' @1kHz (Gs/Oe) Permeability	20k ~ 130k	P 20kHz/0.5T (W/kg) Core loss	<20
μ' @10kHz (Gs/Oe) Permeability	18k ~ 120k	P 100kHz/0.3T (W/kg) Core loss	90
μ' @100kHz (Gs/Oe) Permeability	16k ~ 35k	\	\

1K107B

Specification of 1K107B Nanocrystalline Strip

	J	1K107B	030	23	2
C P/N Description	Slitting Strip	Nanocrystalline B Strip	Width	Thickness	Thickness Tolerance

产 Description: J1K107B-030-232, 1K107B Nanocrystalline slitting strip, width is 3.0mm, thickness is 23 ±2.0μm.

Common Strip Width

Width (mm)	2.0	3.0	3.2	3.5	4.0	4.5	5.0	6.0	6.5	7.0	8.0	10.0
Width (mm)	12	13	15	20	25	30	35	40	45	50	55	60

Common Specifications

P/N	(mm) Width	(μm) Thickness
J1K107B-030-16-2	3.0	14-16
J1K107B-030-18-2		16-18
J1K107B-030-182		18±2
J1K107B-030-202		20±2
J1K107B-030-232		23±2
J1K107B-030-252		25±2

Note:

- 1、 60mm。 Max width
is 60mm.
- 2、 Other customized size strip is
available.
- 3、 Normative reference:《GB/T 19345.1-2017》 Amorphous and Nanocrystalline alloys Part 2: Fe-based
nanocrystalline soft magnetic alloy strip.Nanocrystalline grade 1K107B is equivalent to GB/T 19345.1-2017
category H-type strip.
- 4、 Strip performance of 1K107B is equivalent to Hitachi FT-3, VAC
500F.



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